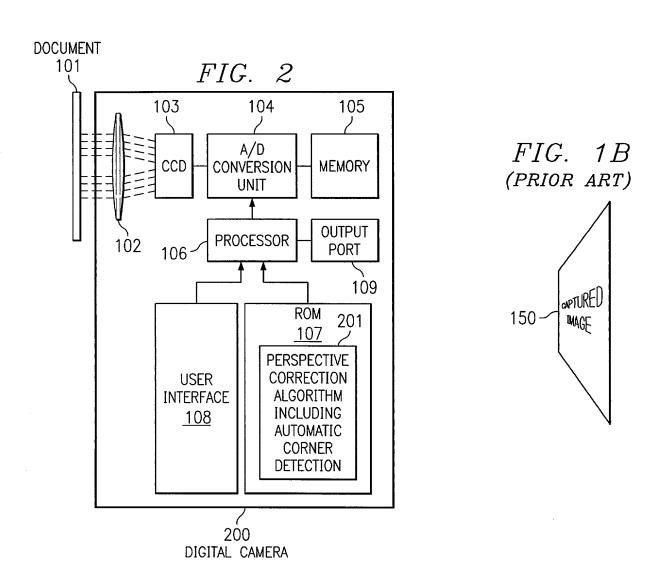
A DIGITALLY CAPTURED IMAGE Tong Zhang 10006275 - 11/10 FIG. 1A DOCUMENT (PRIOR ART) 101 103 104 105 A/D CCD CONVÉRSION **MEMORY** UNIT 109 **-102 OUTPUT PROCESSOR PORT** 106-**DIGITAL CAMERA ROM USER** 100-(CONTROL 108-**INTERFACE** -107

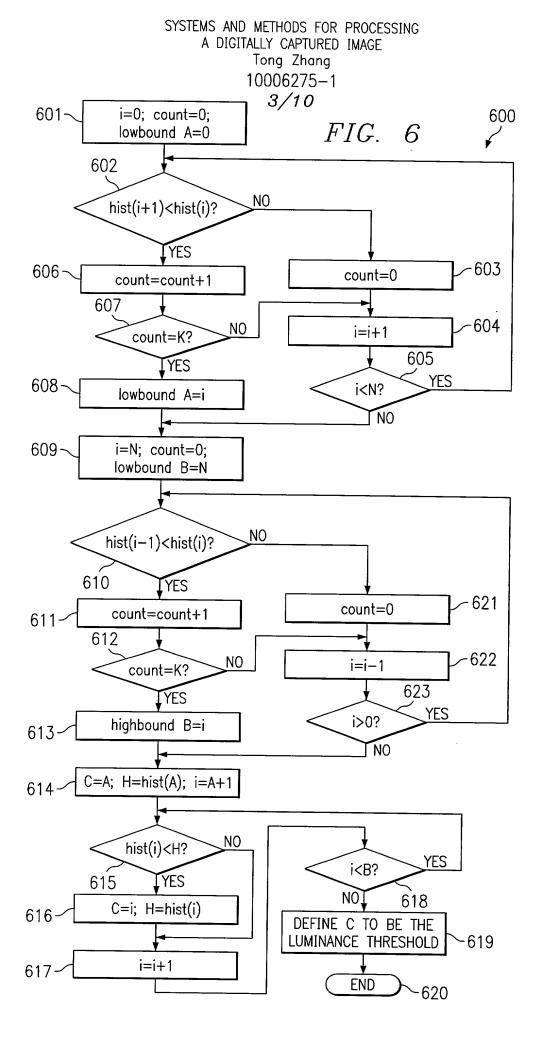
SOFTWARE)

SYSTEMS AND METHODS FOR PROCESSING



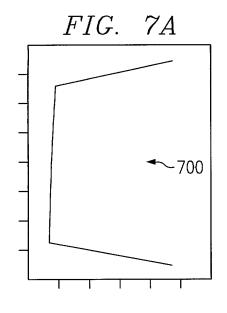
A DIGITALLY CAPTURED IMAGE Tong Zhang 10006275-1 2/10 FIG. 401~ RECEIVE IMAGE DATA TRANSFORM COLOR IMAGE 402~ 400 TO GRAY-SCALE IMAGE COMPUTE HISTOGRAM 403~ OF GRAY-SCALE IMAGE DETERMINE THE ADAPTIVE 404-FIG. LUMINANCE THRESHOLD TRANSFORM GRAY-SCALE IMAGE 405~ TO BINARY IMAGE USING THE ADAPTIVE LUMINANCE THRESHOLD **CAPTURED** DETERMINE FOUR EDGES OF 406 OBJECT IN BINARY IMAGE -300 **IMAGE** DETERMINE LOCATIONS OF THE FOUR CORNERS BASED ON THE EDGES 407-OUTPUT CORNER LOCATIONS FOR PERSPECTIVE DISTORTION 408 CORRECTION OR OTHER PURPOSES CORRECT PERSPECTIVE 409 **END** 410 500 FIG. 5 x10⁴ 7 6 5 **PIXELS** 3 2 1 0 250 50 100 150 200 0 LUMINANCE VALUE

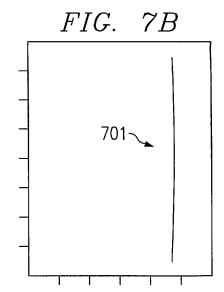
SYSTEMS AND METHODS FOR PROCESSING

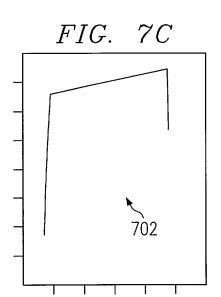


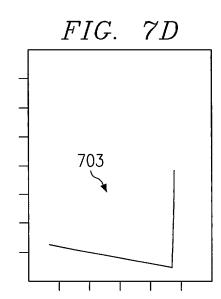
SYSTEMS AND METHODS FOR PROCESSING A DIGITALLY CAPTURED IMAGE Tong Zhang

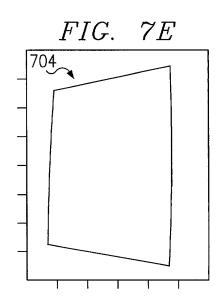
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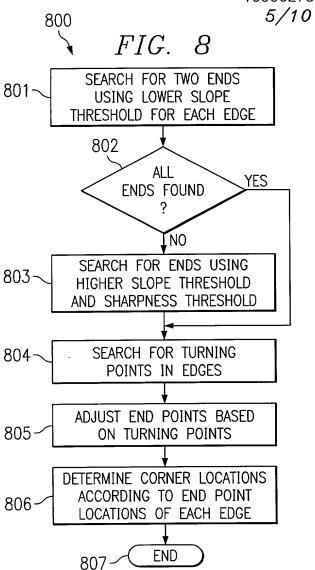


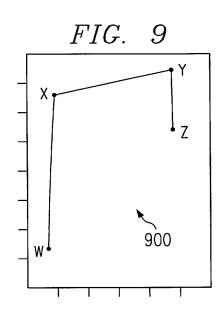


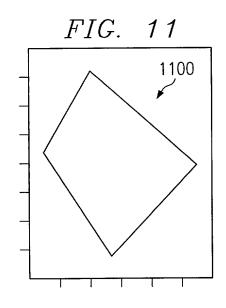


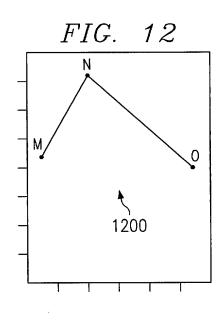


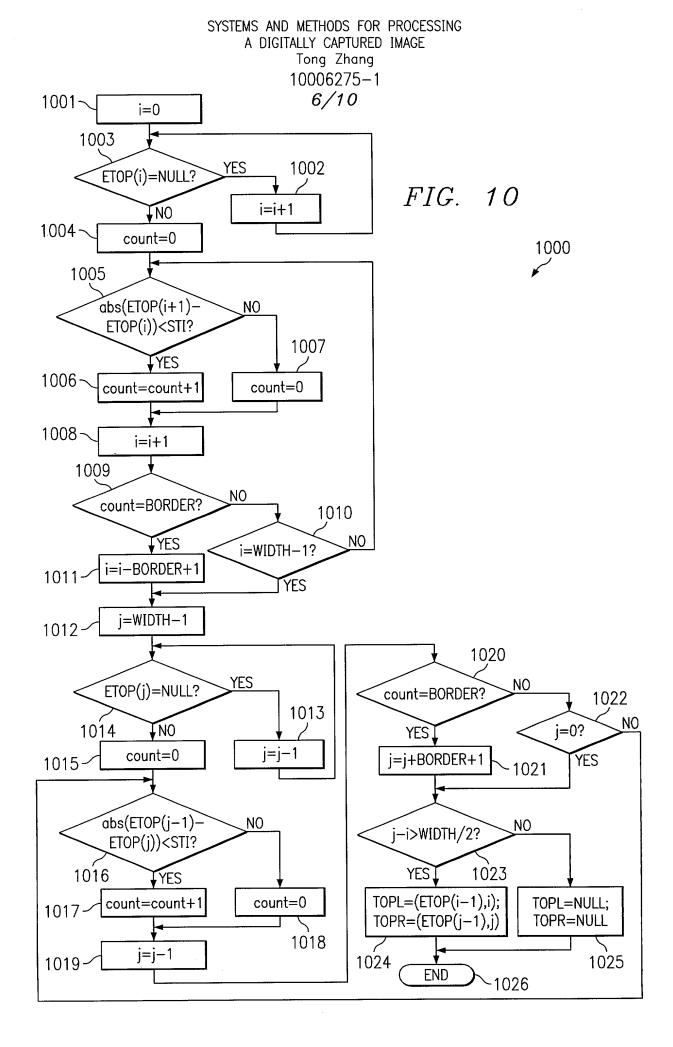
SYSTEMS AND METHODS FOR PROCESSING A DIGITALLY CAPTURED IMAGE Tong Zhang 10006275-1

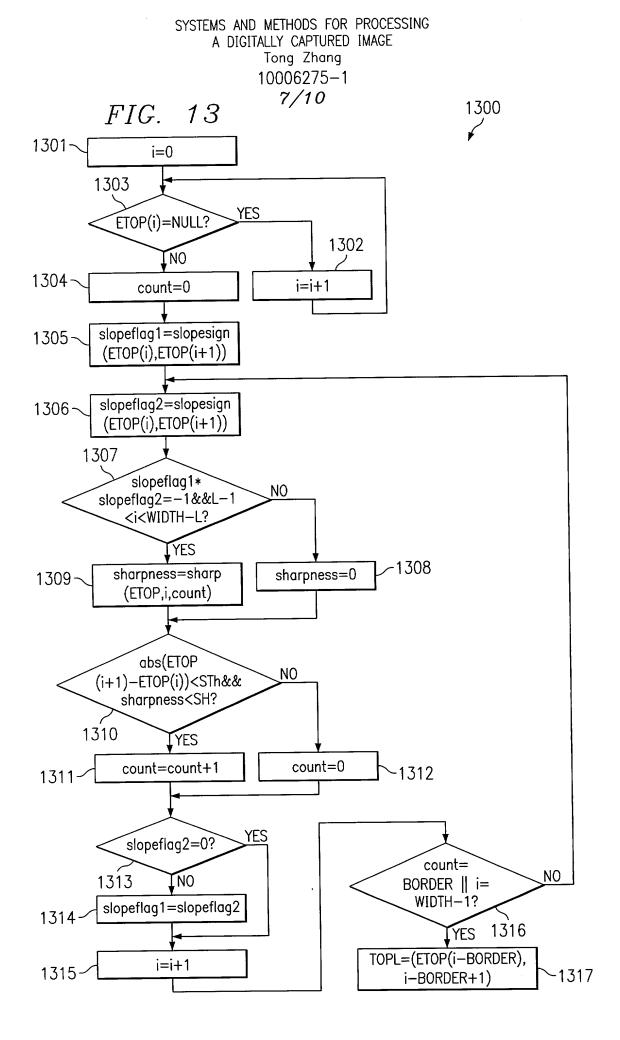


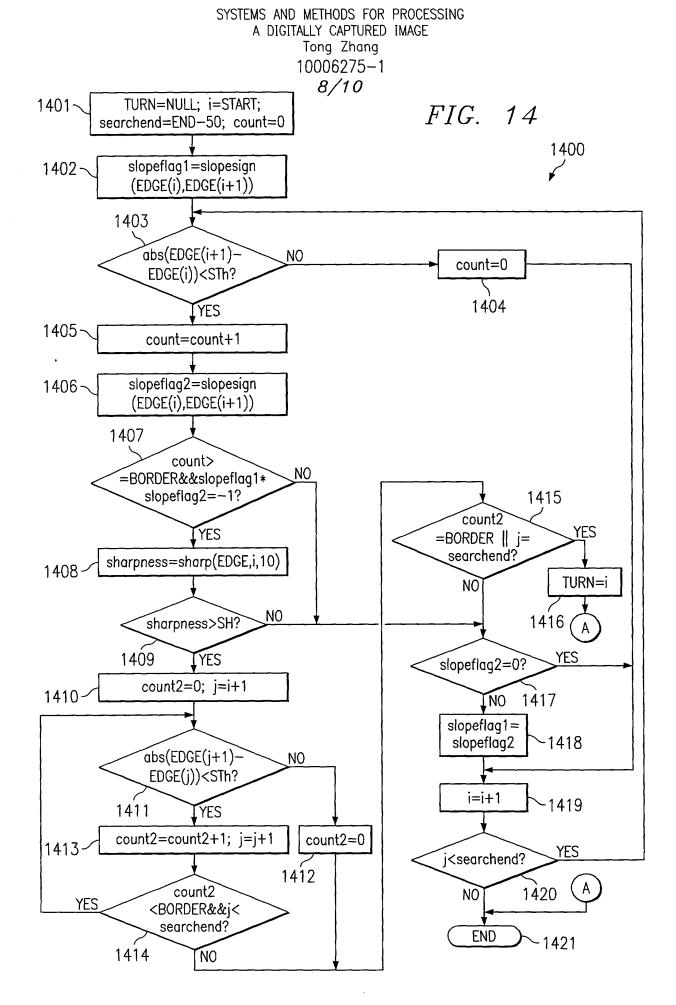


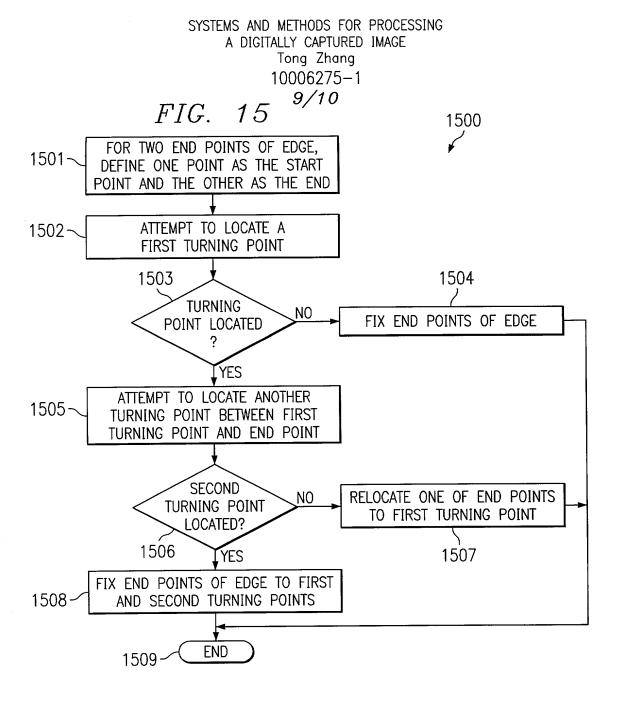


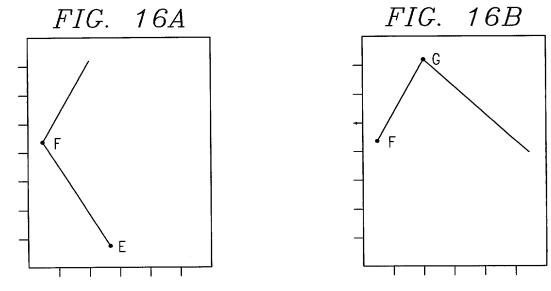






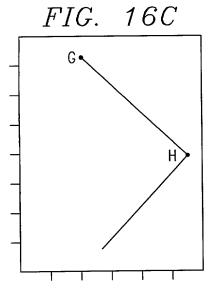


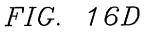


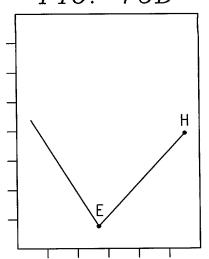


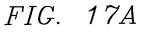
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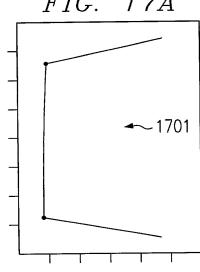
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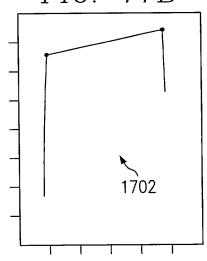


FIG. 17C

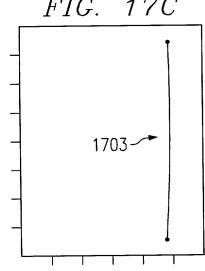


FIG. 17D

